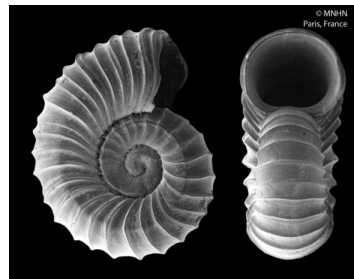




# iDigBio: Digitizing the Past and Present for the Future



Deborah Paul, Florida State University, Digitization and Capacity Building  
David Jennings, Florida Museum of Natural History, Project Manager, iDigBio  
Kevin Love, Florida Museum of Natural History, IT Expert, iDigBio  
iDigBio Mollusk Workshop, Newark, DE July 2017



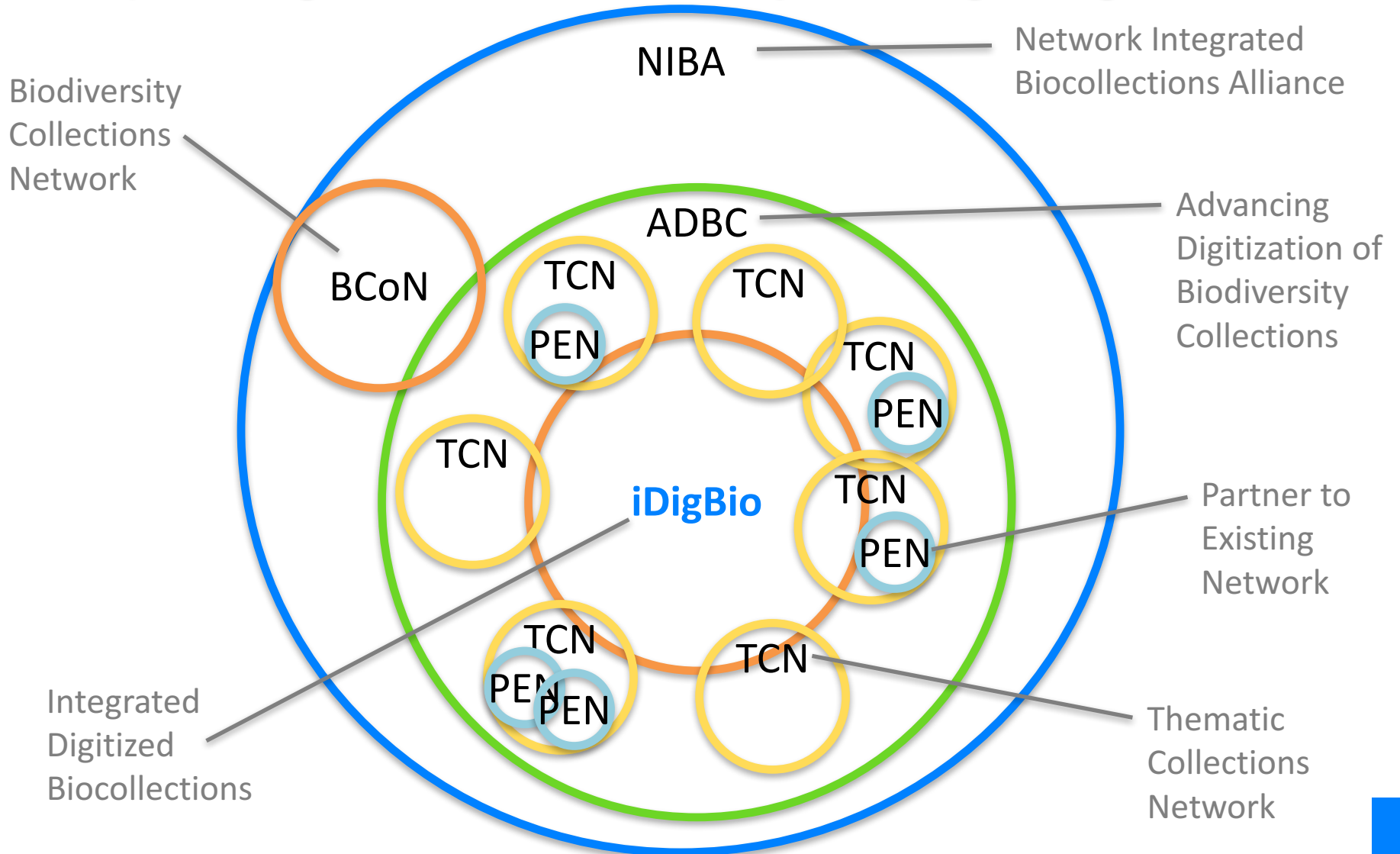
# What is iDigBio?

- iDigBio is the **coordinating center** for the national effort to digitize non-federal U.S. natural history collections
  - NSF’s **Advancing Digitization of Biodiversity Collections (ADBC)** program
    - 10-year, \$100 million national effort
  - Network of institutions organized by theme to focus research, drive digitization efforts, and build community
    - **Thematic Collection Networks (TCNs)**
    - **Partners to Existing Networks (PENs)**



***“To advance scientific knowledge by improving access to digitized information in vouchered scientific collections across the U.S.”***

# Improving data accessibility through digitization

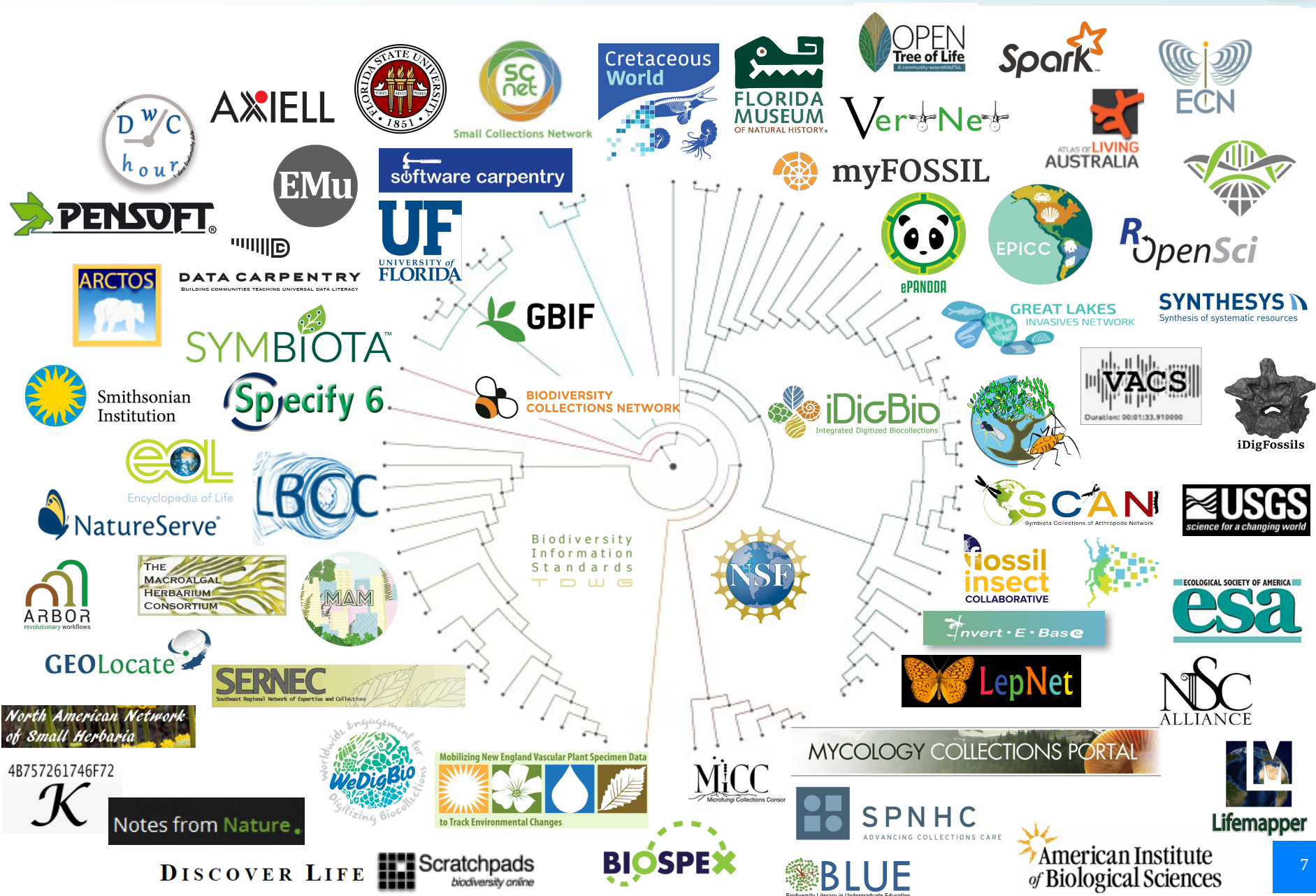


# What does iDigBio do?

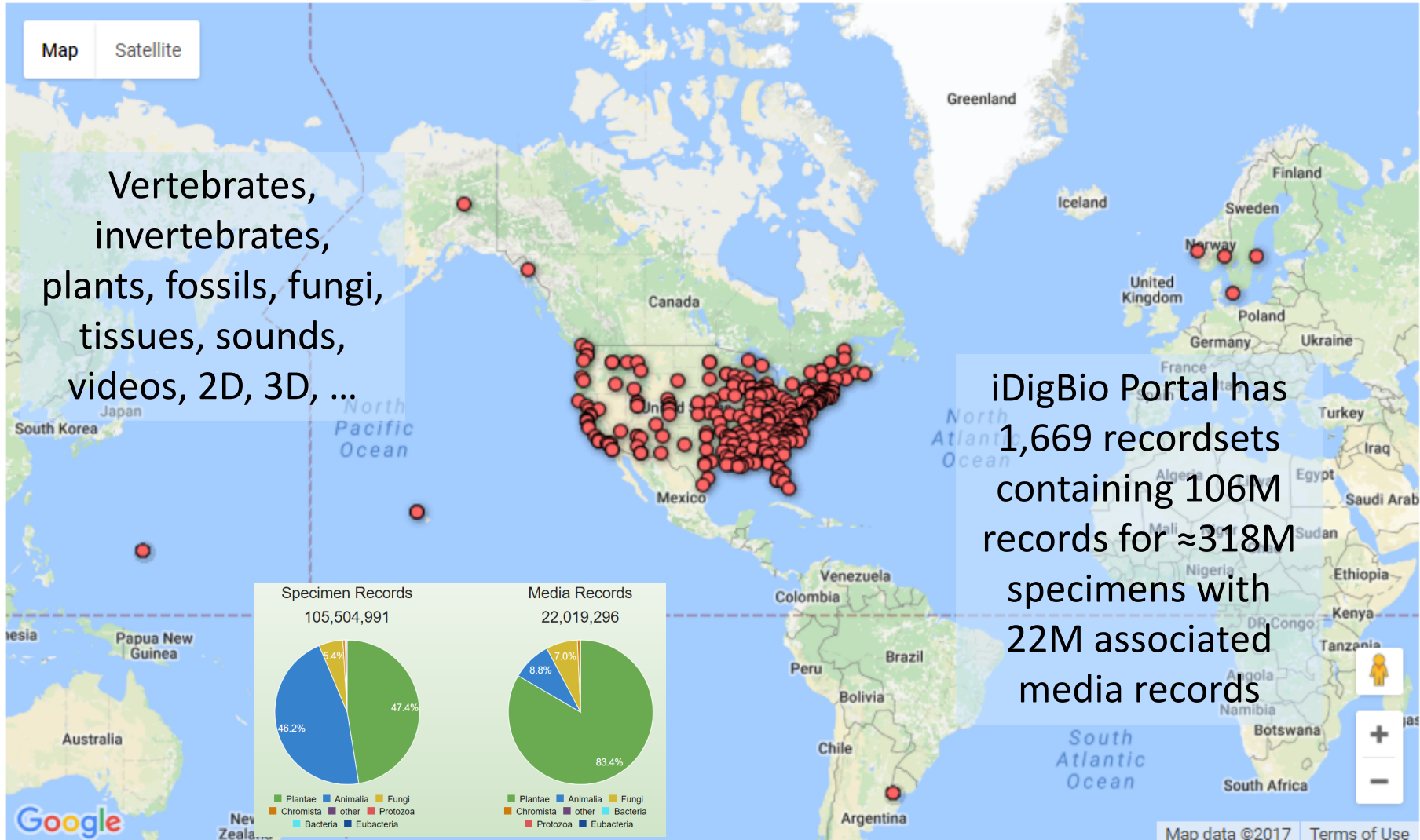
- 1. Facilitate digitization** of biodiversity collections data
  - Standards & workflows
  - Workforce education & training
- 2. Provide access to and discoverability** of biodiversity data in a cloud computing environment
- 3. Facilitate use** of biodiversity data to address key research, environmental, educational, and economic challenges
- 4. Envision the long-term sustainability** of the **national digitization** effort
  - Expand participation
  - Proliferate & broaden uses of biodiversity data







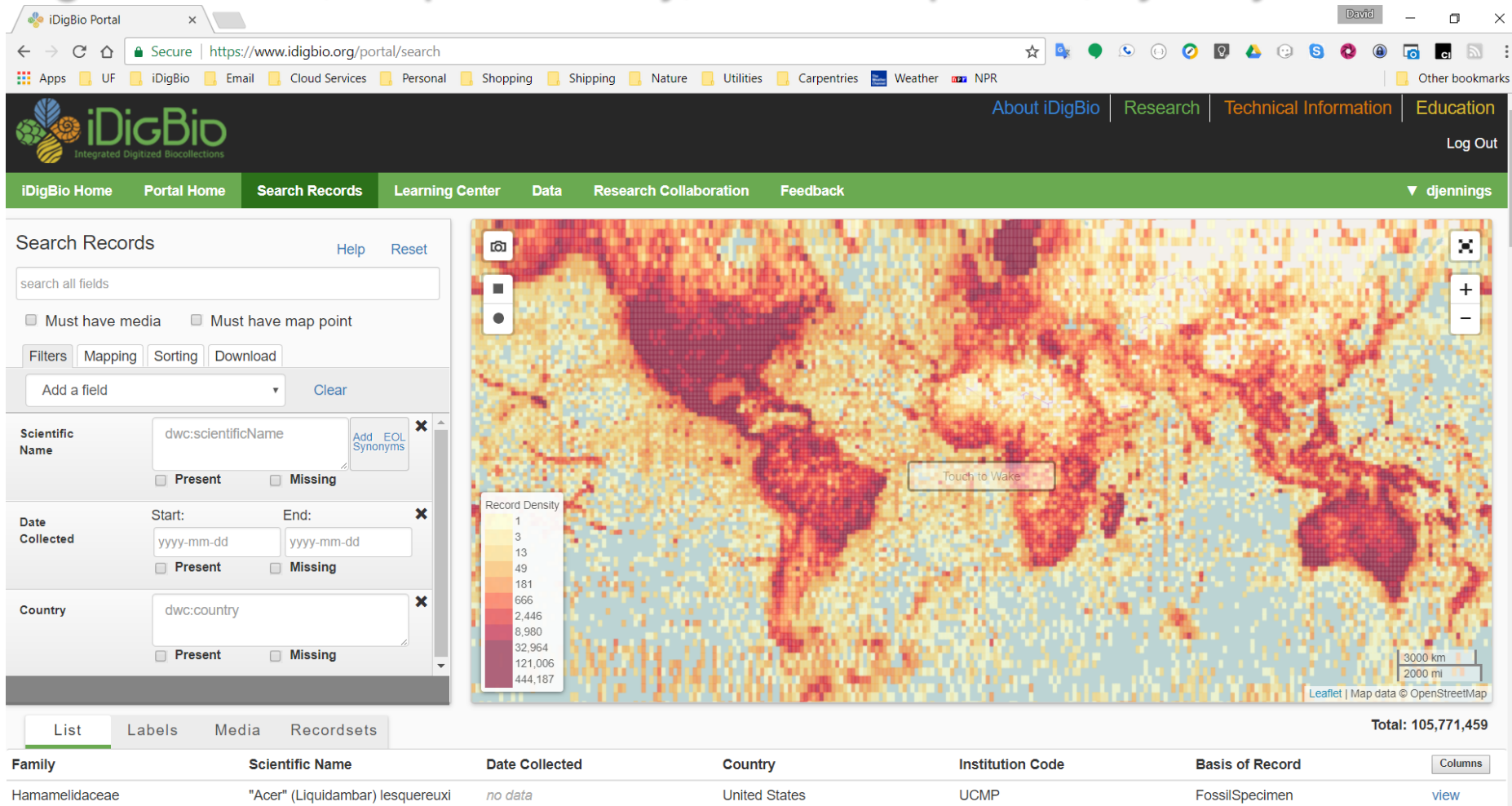
# ADBC National Digitization Network



621 participating collections in 315 institutions (18 TCNs + 17 PENs)



# Flexible search across all data, indexed fields, media, geolocation, map boundary, auto-completion, synonyms, ...



The screenshot shows the iDigBio Portal search interface. The browser address bar displays <https://www.idigbio.org/portal/search>. The page features a navigation menu with options like "Search Records", "Learning Center", "Data", "Research Collaboration", and "Feedback".

**Search Records** section includes:

- Search input: "search all fields"
- Filters: "Must have media" and "Must have map point" (both unchecked)
- Buttons: "Filters", "Mapping", "Sorting", "Download"
- Field selection: "Add a field" dropdown and "Clear" button
- Scientific Name: "dwc:scientificName" with "Present" and "Missing" options, and "Add EOL Synonyms" button
- Date Collected: "Start:" and "End:" fields with "Present" and "Missing" options
- Country: "dwc:country" with "Present" and "Missing" options

The main content area displays a heatmap map showing record density. A legend titled "Record Density" provides a color scale from 1 (lightest) to 444,187 (darkest). A "Touch to Wake" button is visible on the map. A scale bar indicates 3000 km and 2000 mi. The map footer reads "Leaflet | Map data © OpenStreetMap".

At the bottom, a table shows search results with the following columns: Family, Scientific Name, Date Collected, Country, Institution Code, Basis of Record, and Columns. The first row of data is:

Family	Scientific Name	Date Collected	Country	Institution Code	Basis of Record	Columns
Hamamelidaceae	"Acer" (Liquidambar) lesquereuxi	no data	United States	UCMP	FossilSpecimen	<a href="#">view</a>

Total: 105,771,459

<https://www.idigbio.org/portal>

# View search results as list, labels, or media

Family	Scientific Name	Date Collected	Country	Institution Code	Collected By	Locality	Occurrence ID	Catalog Number	Columns
Suberitidae	Tuberella aaptos	1899-10-19	Puerto Rico	USNM	United States Fish Commis...	Mayaguez Harbor	http://n2t.net/ark:/65665/33f...	7662	<a href="#">view</a>
Pieridae	Abais nicippe	1981-10	Puerto Rico	UPRM	Emmer, J. C.	Guayanilla	23df77d9-ccb0-11e4-8f8b-0...	4626	<a href="#">view</a>
Pieridae	Abais nicippe	11/15/81	Puerto Rico	UPRM	De Jes�s, L.	Ponce	23df7219-ccb0-11e4-8f8b-0...	4624	<a href="#">view</a>
Pieridae	Abais nicippe	11/15/87	Puerto Rico	UPRM	De Jes�s, L.	Ponce	23df79b7-ccb0-11e4-8f8b-0...	4627	<a href="#">view</a>
Pieridae	Abais nicippe	9/4/89	Puerto Rico	UPRM	Blanco, J.	Aguadilla	23aa6184-ccb0-11e4-8f8b-...	820	<a href="#">view</a>
Pieridae	Abais nicippe	11/14/48	Puerto Rico	UPRM	Torres, C.	Mayaguez	23df75f4-ccb0-11e4-8f8b-0...	4625	<a href="#">view</a>
Caligidae	Abasia sp.	1977-10-07	Puerto Rico	USNM	S. Alchuler	La Parguera	http://n2t.net/ark:/65665/3e...	266843	<a href="#">view</a>
Delphacidae	Abbosoga errata	1914-07-27	PUERTO RICO	AMNH	Unknown	Maricao	urn:uuid:886a07f8-d8e1-11...	UDCC_TCN 00016869	<a href="#">view</a>
Delphacidae	Abbosoga errata	1947-11-14	Puerto Rico	USNM	no data	Toro Negro Mt.; P.R.	http://n2t.net/ark:/65665/3e...	no data	<a href="#">view</a>
Delphacidae	Abbosoga errata	1962-07-01	PUERTO RICO	USNM	J. Maldonado Capriles	Puntita	urn:uuid:28ab0c86-ca62-11...	UDCC_TCN 00042679	<a href="#">view</a>
Delphacidae	Abbosoga errata	1999-08-08	PUERTO RICO	IBOR	C. W. O'Brien & P. Kovarik	Hwy 120 km 14 Miricao St	urn:uuid:93afd71e-ca62-11...	UDCC_TCN 00042678	<a href="#">view</a>

List Labels **Media** Recordsets

### [Abbosoga errata Caldwell & Martorell, 1951](#)

PUERTO RICO, Maricao, none, Maricao  
 Lat: 18°10' 58" Lon: -66°58' 49"  
 AMNH, UDCC\_TCN 00016869, Unknown

Animalia, Arthropoda, Insecta, Hemiptera

### Delphacidae



1914-07-27

### [Abelmoschus moschatus medik. Medik.](#)

Puerto Rico, Mayag ez (MITA).  
 Lat: 18°12' 15" Lon: -67°6' 1"  
 NY, 01007392, A. H. Liogier

Plantae, Tracheophyta, Magnoliopsida, Malvales

### Malvaceae



1981-03-

### [Pecten mayaguezensis Dall & Simpson](#)

Puerto Rico, Mayaguez Harbor  
 Lat: 18°25' 30" Lon: -67°9' 11"  
 USNM, Invertebrate Zoology, 160062, United States Fish Commission


Animalia, Cnidaria, Anthozoa, Scleractinia

### Pectiniidae



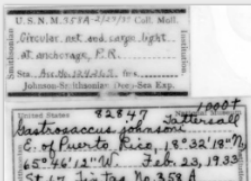
List Labels **Media** Recordsets

3 of 5



**Anolis cristatellus wileyae** MCZ, Herp

1 of 1



**Coifmanniella johnsoni** USNM, Invertebrate Zoology

1 of 1



**Adiantum obliquum** US, Botany

3 of 3



**Platycrepidius** UPRM, INVCOL

3 of 3



**Coereba flaveola** TTRS, Ornithology

# Specimen record pages with summary, details, flags, associated media, georeference, provider, ...

## Specimen Record

[Plantae](#) > [Tracheophyta](#) > [Magnoliopsida](#) > [Fabales](#) > [Fabaceae](#)

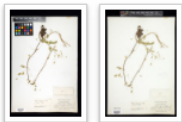
### *Abrus precatorius* L.

From The New York Botanical Garden Herbarium (NY) - Vascular Plant Collection

Continent	North America	Institution Code	Ny
Country	Puerto Rico	Catalog Number	988241
State/Province	San Juan	Collected By	A. A. Heller
Locality	Santurce.	Date Collected	1899-02-20
Latitude	18.44883		
Longitude	-66.06798		



## Media



Data Flags Raw

## Taxonomy

Scientific Name	<i>Abrus precatorius</i> L.
Kingdom	Plantae
Phylum	Magnoliophyta
Class	magnoliopsida
Order	fabales
Family	Fabaceae
Genus	<i>Abrus</i>
Specific Epithet	precatorius
Scientific Name Authors	L.
Nomenclatural Code	ICBN

## Specimen

Catalog Number	988241
Provider Code	NY

Data Flags Raw

Type	Description
geopoint_datum_missing	Geographic Coordinate Missing Geodetic Datum (Assumed to be WGS84).
dwc_taxonrank_replaced	
dwc_taxonrank_added	
dwc_multimedia_added	
gbif_reference_added	
gbif_canonicalname_added	

# Continual focus on quality/improvement, standards, discoverability, attribution, metrics, depth/breadth, ...

Data Corrected Data Use Raw

The table below represents monthly iDigBio portal use statistics for this recordset. *Search* in query. *Download* indicates in how many instances a record from this recordset was downloaded (visually) in the search results in a browser window. *Records Viewed* and *Media Viewed* indicates how many records were viewed in full detail. Note: Monthly statistics aggregation began on Jan 15th 2015; therefore, reporting.

Month of	Search	Download	Seen
01 / 2015	4,644,439	39,693	249
02 / 2015	14,478,408	18,174	872
03 / 2015	11,134,952	92,788	604

Data Flags Raw

Type	Description
geopoint_datum_missing	Geographic Coordinate Missing
dwc_phylum_added	Darwin Core Phylum Added.
dwc_continent_added	Darwin Core Continent Added.
dwc_country_replaced	Darwin Core Country Corrected.
idigbio_isocountrycode_added	iDigBio ISO 3166-1 alpha-3 Cou
dwc_kingdom_added	Darwin Core Kingdom Added.

Data Corrected Data Use Raw

This table shows any data corrections that were performed on this recordset to improve the capabilities of iDigBio Search. The first column represents the correction performed. The last two columns represent the number and percentage of records that were corrected. A complete list of the data quality flags and their descriptions can be found [here](#). Clicking on a data flag name will take you to a search for all records with this flag in this recordset.

Flag	Records With This Flag	(%) Percent With This Flag
<a href="#">dwc_kingdom_added</a> ⓘ	219527	99.388
<a href="#">dwc_phylum_added</a> ⓘ	219527	99.388
<a href="#">geopoint_datum_missing</a> ⓘ	215241	97.448

# List of Data Publishers and List of U.S. Collections

## Data Publishers

This page shows all iDigBio data contributors. If you are interested in providing data, consult the [data ingestion guide](#) for more information.

	Record Count	Media Record Count
Total from Providers	103,668,173	21,855,119
Total in API	105,771,459	22,019,262
Total Indexed (all data) *	105,771,459	22,019,296

\* Data that is marked deleted in iDigBio remains indexed until a cleanup is run.

## Publisher Summary

Publisher Name	Records			Media		
	Digest	API	Index	Digest	API	Index
<a href="#">TORCH Portal Darwin Core Archive rss feed</a>	77,901	77,901	77,901	2,541	2,541	2,541
<a href="#">xBioD IPT in the Museum of Biological Diversity at the Ohio</a>	664,832	664,832	664,832	2,835	2,835	2,835

## Collections

This is intended to be a complete list of U.S. collections in the United States of America. If you know of institutions or collections that are not shown in the list, please complete [this form](#). If you have any questions or encounter any difficulty, please contact [info@idigbio.org](mailto:info@idigbio.org) or [cmh@flmnh.ufl.edu](mailto:cmh@flmnh.ufl.edu).

[Show Map of Collections](#)

[Settings](#)

Institution ▲	Collection	Contact	Contact Role	Update/Add Information	Show On Map	Recordsets
<a href="#">Abilene Christian University</a>	Herbarium	Joshua Brokaw	Assistant Curator	<a href="#">Show On Map</a>		
<a href="#">Academy of Natural Sciences of Drexel</a>	Entomology	Jon Gelhaus	Curator Chair	<a href="#">Show On Map</a>	<a href="#">Search Recordset(s)</a>	

**Metadata = Discovery**

# SCIENTIFIC REPORTS

**OPEN** *Macrodinychus* mites as parasitoids of invasive ants: an overlooked parasitic association

Received: 30 January 2016  
Jean-Paul Lachaud<sup>1,2</sup>, Hans Klompen<sup>1</sup> & Gabriela Pérez-Lachaud<sup>1</sup>

**Taxonomic and Behavioral Composition of an Island Fauna: A Survey of Bees (Hymenoptera: Apoidea: Anthophila) on Martha's Vineyard, Massachusetts**  
Author(s): Paul Z. Goldstein and John S. Ascher  
Source: Proceedings of the Entomological Society of Washington, 118(1):37-92.

Biodiversity Data Journal 4: e10356  
doi: 10.3897/BDJ.4.e10356

Editorial

**Species Conservation Profiles compliant with the IUCN Red List of Threatened Species**

† Pavel Stoev<sup>1\*</sup>, Teodor Georgiev<sup>1</sup>, Viktor Senderov<sup>2,3\*</sup>, Lyubomir Penev<sup>4,5</sup>

**Beetles (Coleoptera) of Peru: A Survey of the Families Erotylidae Latreille, 1802**  
Author(s): Joseph V. McHugh and Caroline S. Chaboo  
Source: Journal of the Kansas Entomological Society, 88(2):274-282.

**Mesoamerican Herpetology**  
www.mesoamericanherpetology.com

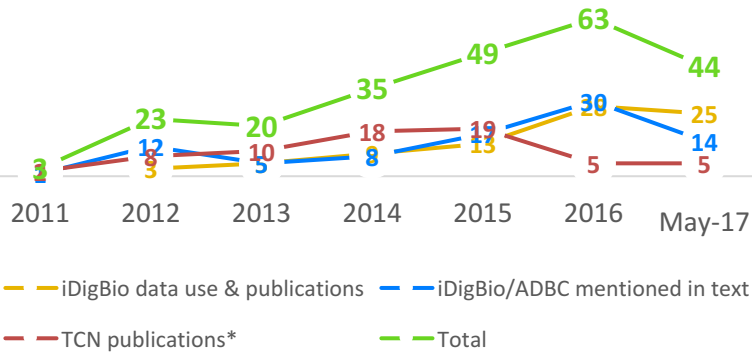
**The herpetofauna of Nayarit, Mexico: composition, distribution and conservation status**  
GUILLERMO A. WOOLRICH-PIÑA<sup>1</sup>, PABLO J. RAMÍREZ-SILVA<sup>1</sup>, JUAN PABLO RAMÍREZ-SILVA<sup>1</sup>, ELI GARCÍA-PADILLA<sup>1</sup>  
DECK ET AL. STANDARDS IN GENOMIC SCIENCES (2015) 1025  
DOI: 10.1186/s40793-015-0014-0

**MEETING REPORT**  
**Meeting report: Identifying practical applications of ontologies for biodiversity informatics**  
John Deck<sup>1\*</sup>, Robert Guralnick<sup>2</sup>, Ramona Walls<sup>3</sup>, Stanley Blum<sup>4</sup>, Melissa Haendel<sup>5</sup>, Andréa Matsunaga<sup>6</sup> and John Wieczorek<sup>7</sup>

**Article**  
**Revised diagnosis of the genus *Gonorynchus* McClelland (Teleostei: Cyprinidae: Labeonini) with redescription of *G. latius* (Hamilton) and revalidation of *G. watanah* (Sykes)**  
PATRICK J. CICCOTTO & LAWRENCE M. PAGE  
Zootaxa 4127 (3): 471–492  
http://www.mapress.com/zootaxa/

**Palaeontologia Electronica**  
http://palaeo-electronica.org  
**The Digital Atlas of Ancient Life: delivering information on paleontology and biogeography via the web**  
Jonathan R. Hendricks, Alycia L. Stigall, and Bruce S. Lieberman

## ADBC PUBLICATIONS



**Patterns of abiotic niche shifts in progenitors**  
D. Blaine Marchant<sup>1,2</sup>, Douglas E. Soltis<sup>1,2</sup>

**Methods in Ecology and Evolution**  
The effect of repeated, lethal sampling on wild bee abundance and diversity  
Zachariah J. Gezon<sup>1,2\*</sup>, Eli S. Wyman<sup>3</sup>, John S. Ascher<sup>4</sup>, David W. Inouye<sup>2,5</sup> and Rebecca E. Irwin<sup>1,2</sup>

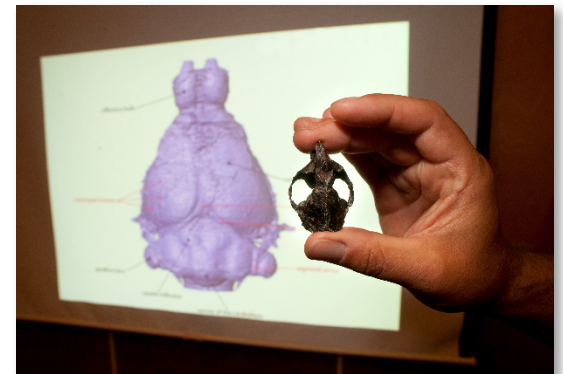
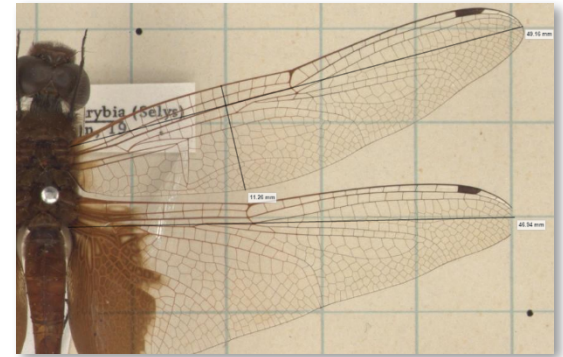
# Where are iDigBio & ADBC headed?

- Digitized data from **ALL** vouchered biodiversity collections
- Improve **data access & discoverability**
- Highlight/promote/facilitate **broad & diverse uses of biodiversity data**
- Promote/improve **data quality & standards**
- Develop **sustainability** strategies
- Facilitate **public participation** in digitization



# We want to engage with you!

- iDigBio provides access to data with the means to answer research questions
- Many opportunities for collaboration and potential funding:
  - **Public participation** in digitization
    - e.g., host a [WeDigBio](#) event, host a DwC hour
  - **Research** using the data already in the portal
    - e.g., niche modeling, conservation, etc.
  - **Data mining** the portal for new discoveries
    - e.g., extract measurements/characteristics from images or 3D models
  - Gathering all of the “**dark data**”
    - e.g., proposals for TCN, PEN, CSBR, IMLS, etc.
  - **Enhancing and enriching** the data
    - e.g., data linking, field notes, etc.







**WeDigBio.org**

**Contact:**

Libby Ellwood: [ellwoodlibby@gmail.com](mailto:ellwoodlibby@gmail.com)

Austin Mast: [amast@bio.fsu.edu](mailto:amast@bio.fsu.edu)

Kevin Love: [kevinlove@ufl.edu](mailto:kevinlove@ufl.edu)

Deb Paul: [dpaul@fsu.edu](mailto:dpaul@fsu.edu)

**Worldwide Engagement for Digitizing Biocollections** A 4-day event that engages participants online and onsite in digitizing natural history collections

**Join us 19-22 October for WeDigBio 2017!**  
**Sign up at [wedigbio.org](http://wedigbio.org) !**

## GOALS

- Increase the rate of digitization of biodiversity collections
- Raise the profile of collections and their significance in science, society, and education
- Build our global biodiversity community

Remember





# Get involved!



[idigbio.org/wiki](http://idigbio.org/wiki)



[facebook.com/iDigBio](https://facebook.com/iDigBio)



[twitter.com/iDigBio](https://twitter.com/iDigBio)



[vimeo.com/iDigBio](https://vimeo.com/iDigBio)



[idigbio.org/rss-feed.xml](http://idigbio.org/rss-feed.xml)



[idigbio.org/events-calendar/export.ics](http://idigbio.org/events-calendar/export.ics)

**I Dig Bio**  
**do you?**



**iDigBio**  
Integrated Digitized Biocollections

